



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,285	09/24/2003	Satoru Oishi	1232-5165	6579

27123 7590 10/04/2005
MORGAN & FINNEGAN, L.L.P.
3 WORLD FINANCIAL CENTER
NEW YORK, NY 10281-2101

EXAMINER

LAU, TUNG S

ART UNIT	PAPER NUMBER
----------	--------------

2863

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary

Application No.

10/669,285

Applicant(s)

OISHI ET AL.

Examiner

Tung S. Lau

Art Unit

2863

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 7-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 8 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

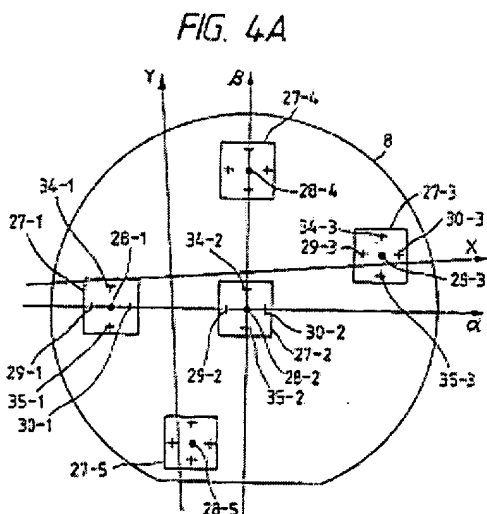
A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-4, 7-8 and 10-12 are rejected under 35 U.S.C. 102(a) as being anticipated by Yasuda et al. (U.S. Patent application publication 2001/0049589).

Regarding claim 1:

Yasuda discloses a position detecting method of detecting a position of a mark formed on an object (fig. 4a), said method comprising the steps of: forming an image of a mark on a sensor (fig. 4a, unit 28-1, 27-1, 27-4, 27-3, 27-5);



performing a first processes an image signal obtained by the sensor with respect to each of plurality of values of a parameter of the first process (fig. 4a, unit 28-1,

Art Unit: 2863

27-1, 27-4, 27-3, 27-5, fig. 1, unit 103); performing a second process that processes a signal obtained by the first process to obtain a feature value with respect to each of the plurality of value of the parameter (fig. 1, unit 104); determining a value of the parameter based on feature value obtained by the second process and a reference value defined with respect to the mark (fig. 1, unit 105); and detecting a position of the mark based on a signal obtained by the first process using the value of the parameter determined in said determining step (fig. 1, unit 106-108).

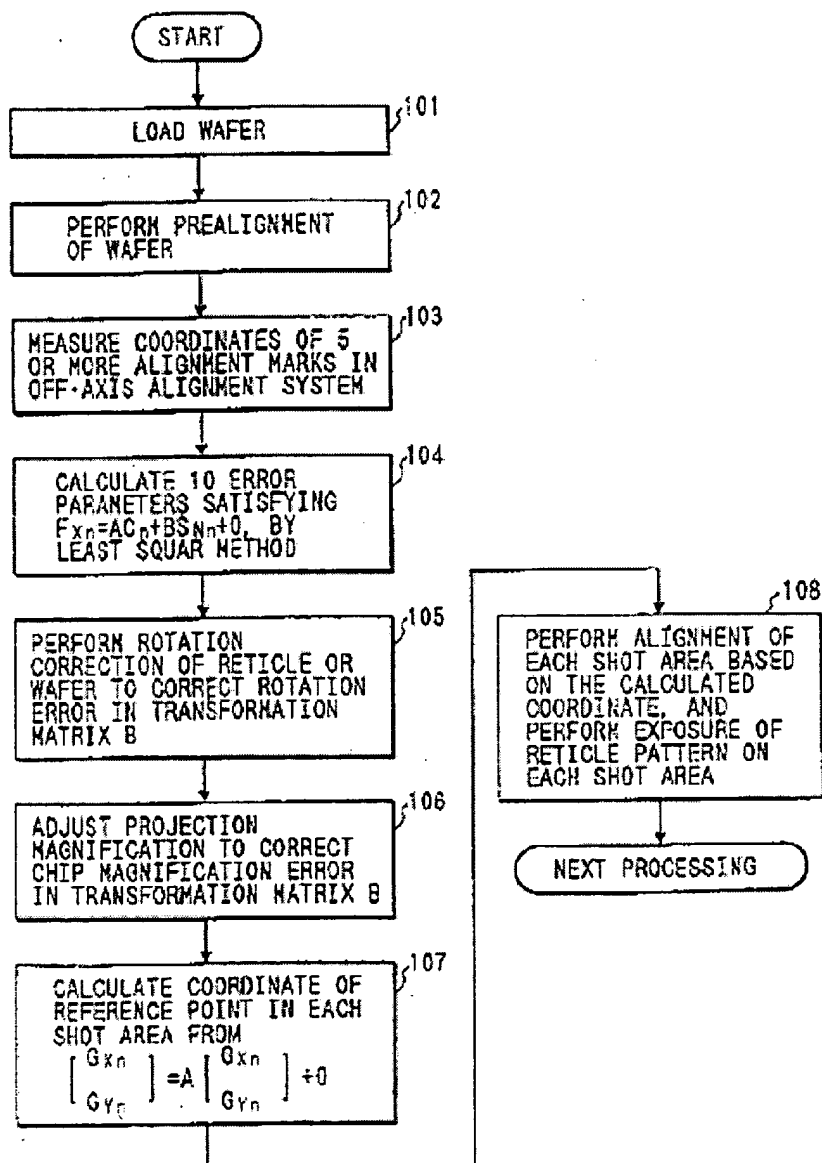
Regarding claim 10:

Yasuda discloses a position detecting apparatus for detecting a position of a mark on an object (fig. 4a) said apparatus comprising: a detecting system to detect an image of a mark (fig. 4a); and a processing system to perform a first process that processes an image signal obtained by said detecting system with respect to each of a plurality of values of a parameter of the first process (fig. 4a, unit 28-1, 27-1, 27-4, 27-3, 27-5, fig. 1, unit 103) to perform a second process that processes a signal obtained by the first process to obtain a feature value with respect to each of the plurality of value of the parameter (fig. 1, unit 104), to determine a value of the parameter based on the feature values obtained by the second process and a reference value defined with respect to the mark (fig. 1, unit 105), and to detect a position of the mark based on signal obtained by the first process using the determined value of the parameter (fig. 1, unit 106-108).

Art Unit: 2863

Regarding claim 2, Yasuda also discloses filtering including zero phase filter of the order of the filter (fig. 1, unit 106); Regarding claim 3, Yasuda also discloses using a polynomial of the first process comprises an order of the polynomial (fig. 1, unit 107);

FIG. 1



Regarding claim 4, Yasuda also discloses Feature value corresponds to an interval between elements of the mark (fig. 1, unit 107); Regarding claim 7, Yasuda also discloses deviation of the feature from the reference value (fig. 1, unit 106); Regarding claim 8, Yasuda also discloses variation of a plurality of features (fig. 4b); Regarding claim 11, Yasuda also discloses detect a position mark formed on the object (fig. 4a, unit 28-1, 27-1, 27-4, 27-3, 27-5); Regarding claim 12, Yasuda also discloses developing the pattern has been transferred (fig. 1, unit 108) and processing the developed object to fabricate the device (fig. 1, unit 108).

Allowable Subject Matter

2. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitation of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: prior art fail to teach regarding claim 9, a process of removing noise.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

3. Applicant's arguments with respect to the amended claims have been considered but are moot in view of the new ground(s) of rejection. However, applicant's arguments filed 09/21/2005 have been fully considered but they are not persuasive.

A. Applicant argues that the prior art does not show the 'performing a first processes an image signal obtained by the sensor with respect to each of plurality of values of a parameter of the first process; performing a second process that processes a signal obtained by the first process to obtain a feature value with respect to each of the plurality of value of the parameter'. Yasuda clearly discloses 'performing a first processes an image signal obtained by the sensor with respect to each of plurality of values of a parameter of the first process in fig. 4a, unit 28-1, 27-1, 27-4, 27-3, 27-5, fig. 1, unit 103; performing a second process that processes a signal obtained by the first process to obtain a feature value with respect to each of the plurality of value of the parameter in fig. 1, unit 104'.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tung S Lau whose telephone number is 571-272-2274. The examiner can normally be reached on M-F 9-5:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on 571-272-2269. The fax phone numbers for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2863

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TL


John Barlow
Supervisory Patent Examiner
Technology Center 2800